

CLEAR CREEK
ENVIRONMENTAL ASSESSMENT
EA OR-025-99-16

Bureau of Land Management
Burns District Office
Three Rivers Resource Area
28910 Hwy 20 West
Hines, Oregon 97738

Case File Numbers: 3602272, 3602278, 3602289

May 2002

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CLEAR CREEK RIPARIAN FENCE
ENVIRONMENTAL ASSESSMENT
OR-025-99-16

CHAPTER I. INTRODUCTION, PURPOSE OF AND NEED FOR ACTION

- A. This Environmental Assessment (EA) is being completed to analyze actions to improve riparian conditions in the Stinkingwater Allotment. The project area is located approximately 28 miles east of Burns, in T. 22 S., R. 34 E., Sections 2, 3, 11, 12, 13, 14, 22, 23, 27, and 34 and in T. 21 S., R. 34 E., Section 35. The project area is around Clear Creek near the top of Stinkingwater Pass and the eastern two-thirds of the Connolly Basin Pasture near the Biscuitroot Area of Critical Environmental Concern (ACEC). The project area is characterized by sagebrush grasslands and juniper sagebrush grasslands.
- B. The purpose of the project is to meet the objectives in the Stinkingwater Allotment Management Plan (AMP), which would:
 - 1. Promote improvement in the riparian conditions of Clear Creek.
 - 2. Promote improvement in range conditions.
 - 3. Improve upland and riparian conditions in the Connolly Basin Pasture of the Stinkingwater Allotment.
- C. The need for the proposed action is because the current system does not adequately protect the riparian system of Clear Creek.

During the latter part of the year, livestock congregate in the riparian areas of Clear Creek causing unacceptable damage. Current water quality does not meet Oregon State Department of Environmental Quality standards on Stinkingwater Creek, of which Clear Creek is a tributary. Range improvements are needed to facilitate a grazing system to improve water quality in Clear Creek by reducing fecal matter, siltation, and reestablishment of riparian vegetation.
- D. This project is in conformance with the Three Rivers Resource Management Plan (RMP) of 1992, Federal and State Standards and Guidelines for Rangeland Health, the Stinkingwater AMP of 1997, and is consistent with the ACEC management plan.

CHAPTER II. ALTERNATIVES INCLUDING THE PROPOSED ACTION

A. Alternative I.- Proposed Action

This alternative proposes to create a riparian pasture and develop water sources to improve riparian conditions and livestock distribution. The proposed action is to:

- Construct approximately 3.2 miles of 3-strand fence along the north rim of Clear Creek to the Lazy Man Reservoir creating two pastures, Connolly Basin (a riparian pasture) and Stinkingwater Pass (Map A).
- Install double gates in three locations to provide for wild horse movement when livestock are not present.
- Develop three springs in T. 22 E., R. 34 E., Section 22, NE $\frac{1}{4}$ NE $\frac{1}{4}$, Section 11, NE $\frac{1}{4}$ NW $\frac{1}{4}$, and T. 21 S., R. 34 E., Section 35, SE $\frac{1}{4}$ SE $\frac{1}{4}$.
- Control juniper at two sites around the spring areas in T. 22 S., R. 34 E., Section 22, NE $\frac{1}{4}$ NE $\frac{1}{4}$, and Section 11, NE $\frac{1}{4}$ NW $\frac{1}{4}$.
- No new reservoirs would be constructed.

Any fences proposed in the alternatives would be constructed to Bureau standards with the top two wires barbed and the bottom one smooth, and 5½-foot green steel posts. The fence would follow specifications designed to minimize restrictions to wildlife movement as outlined in Appendix 12 of the Three Rivers RMP and Bureau of Land Management (BLM) Manual Handbook H-1741-1. Proposed spring development and fencing for alternatives would be in accordance with standard procedures and design elements, which include the interception of flow, a collection device, pipelines, and water troughs. The water troughs would have float systems on them to assist in maintaining water at the spring head. Ramps, rocks or float boards would be provided in all water troughs for birds and mammals to gain access to and/or escape from the water. The spring source and trough overflow area would be fenced to provide meadow habitat, prevent livestock grazing and trampling.

The grazing season for the Stinkingwater Allotment would be changed to allow the proposed new Connolly Basin Pasture (512 AUMs) to be utilized early in the allotment rotation with the proposed Stinkingwater Pass Pasture (738 AUMs) being deferred (Map B).

B. Alternative II - Clear Creek Fence Two

The objectives of this alternative are the same as Alternative I and would be implemented as follows:

- 3.8 miles of fence would be constructed creating two pastures, Connolly Basin (a riparian pasture) and Stinkingwater Pass as identified in Map C.
- Install double gates in three locations to provide for wild horse movement when livestock are not present.
- Develop six springs in T. 22 E., R. 34 E., Section 2, NW $\frac{1}{4}$ NW $\frac{1}{4}$; Section 3, SE $\frac{1}{4}$ SE $\frac{1}{4}$; Section 22, NE $\frac{1}{4}$ NE $\frac{1}{4}$; Section 11, NE $\frac{1}{4}$ NW $\frac{1}{4}$; Section 12, NW $\frac{1}{4}$ NW $\frac{1}{4}$; and T. 21 S., R. 34 E., Section 35, SE $\frac{1}{4}$ SE $\frac{1}{4}$.
- Juniper control at four sites are proposed around the spring areas in T. 22 S., R. 34 E., Section 3, SE $\frac{1}{4}$ SE $\frac{1}{4}$; Section 2, NW $\frac{1}{4}$ NW $\frac{1}{4}$; Section 22, NE $\frac{1}{4}$ NE $\frac{1}{4}$; and Section 11, NE $\frac{1}{4}$ NW $\frac{1}{4}$.
- Develop one reservoir of approximately 2 acres in T. 22 S., R. 34 E., Section 10, NW $\frac{1}{4}$ NW $\frac{1}{4}$ (Map C).
- The grazing rotation for the Stinkingwater Allotment would be changed to allow the proposed new Connolly Basin Pasture (362 AUMs) to be utilized during the grazing season rotation with the proposed Stinkingwater Pass Pasture (888 AUMs) being deferred (Map D).

C. Alternative III - Clear Creek Fence Three

The objectives of this alternative are also the same as Alternative I and would be implemented as follows:

- 3.2 miles of fence would be constructed as shown on Map E.
- Install double gates in three locations to provide for wild horse movement when livestock are not present.
- The grazing season for the Stinkingwater Allotment would be changed to allow the proposed new Connolly Basin Pasture (312 AUMs) to be utilized early in the allotment rotation with the proposed Stinkingwater Pass Pasture (938 AUMs) being deferred (Map F).
- No springs would be developed.
- No reservoirs would be constructed.
- There would be no juniper treatments.

D. Alternative IV - Clear Creek Fence Four

This alternative would not create a riparian pasture. Riparian protection would be provided by a large exclosure. Elements of the alternative are as follows:

- Construct approximately 6.3 miles of 3-strand fence along both rims of Clear Creek in the existing Connolly Basin Pasture of the Stinkingwater Allotment to create a large exclosure (Map G).
- No gates would be constructed.
- Develop one spring in T. 22 E., R. 34 E., Section 11, NE $\frac{1}{4}$ NW $\frac{1}{4}$.

- Two juniper control sites are proposed around the spring area in T. 22 S., R. 34 E., Section 22, NE¼NE¼ and Section 11, NE¼NW¼.
- No reservoirs would be constructed.
- The grazing season for the Stinkingwater Allotment would be changed from the present management plan to graze the seedlings early and enter the Connolly Basin Pasture after June 15 yearly (Map H).

Under this alternative the project area would be grazed at 1,125 AUMs, which is a reduction of 125 AUMs.

E. Alternative V - No Action

The no action alternative would not construct the fence, develop the springs, the reservoir, control juniper, or make any other changes to the existing grazing system.

F. Other Alternatives Not Analyzed

Fence and utilize the ACEC early - This alternative was considered, but not analyzed as utilization of the ACEC would be during the spring prior to June 15, which is not in conformance with the ACEC management plan.

CHAPTER III. AFFECTED ENVIRONMENTS

The following resources are not found in the project area: Wilderness, Wilderness Study Areas, Wild and Scenic Rivers, minority or economically depressed populations, flood plains, prime farmlands, paleontology or hazardous materials.

A. Critical Elements

1. Areas of Critical Environmental Concern

This project is located adjacent to the Biscuitroot ACEC.

2. Cultural Heritage

The area of affect has not been surveyed for cultural resources at this time, however, it would be inventoried for archaeological sites and paleontological localities prior to project implementation. The area is adjacent to the ACEC, an important root gathering area used by the Burns Paiute Tribe who has been consulted regarding the project.

3. Noxious Weeds

Areas of medusahead rye exist in the uplands to the east and north of the project area.

4. Special Status Fauna

Within the proposed area Greater sage-grouse nesting and brood-rearing habitat occurs and the leks for this Special Status species are located within 2 to 3 miles.

Habitat for the Columbia spotted frog, a Federal candidate for listing as threatened or endangered, occurs within the proposed project area. Although no Columbia spotted frogs are known to occur in this habitat; further inventory would take place prior to project implementation.

5. Special Status Flora

Known sites of short-lobed penstemon (*Penstemon seorsus*) are in the project vicinity. This Bureau tracking species is on the Oregon Natural Heritage Program List 3, and may be threatened or endangered in Oregon.

6. Water Quality

Clear Creek is not on the Oregon Department of Environmental Quality's 303(d) list of water quality limited streams; however, due to limited riparian vegetation, stream shading is reduced and sediment retention is limited. These two conditions lead to degraded water quality through higher water temperatures and excessive stream sedimentation which can stress aquatic ecosystems, leading to reduced population sizes and species diversity.

7. Riparian Conditions

A 1998 Proper Functioning Condition (PFC) assessment place the affected area of Clear Creek in the functional at-risk category. Conditions have not improved since the assessment.

B. Noncritical Elements

1. Range

a. Vegetation

Major vegetation types in this area are primarily stiff sagebrush/bluegrass, big sagebrush/bluebunch wheatgrass, mountain big sagebrush/bluebunch wheatgrass, bluebunch wheatgrass, mountain big sagebrush/Idaho fescue which are in fair to good condition.

b. Soils

General soils are in the Merlin - Observation - Lambring soils group. Soils are in 15 percent stable, 65 percent slight, and 20 percent moderate erosion condition classes.

c. Livestock Management

At present, livestock management is an early/deferred/rest rotation system with the Stinkingwater Creek seeding utilized early one year and rested the following. The Clear Creek seeding is rested one year and utilized on opposite years from the Stinkingwater seeding. Due to private property being fenced, the Stinkingwater seeding has been split into two pastures. The Bartlett Mountain Pasture is rested one year and utilized the next, and Connolly Basin Pasture is used after June 15 yearly.

2. Wildlife

The Stinkingwater Allotment supports a diversity of wildlife including deer, elk, and pronghorn antelope along with many other species.

3. Recreation and Visual Resources

Recreation values are high within the Stinkingwater Mountains. Recreational opportunities include driving for pleasure, hunting, hiking, fishing, and rock-hounding. Off-Highway Vehicle (OHV) use is limited to existing roads and ways within the ACEC. Portions of the Clear Creek area are in Visual Resource Management (VRM) Class III with the remainder of the EA area in VRM Class IV, both of which allow changes to the landscape.

4. Fish and Aquatic Resources

Redband trout (*Oncorhynchus mykiss ssp.*) are a Special Status species in Oregon.

5. Wild and Free-Roaming Horses

The area is within the Stinkingwater Herd Management Area for Wild and Free-Roaming Horses.

CHAPTER IV. ENVIRONMENTAL CONSEQUENCES

A. Alternative I - Clear Creek Fence One (Proposed Action)

1. Critical Elements

a. Areas of Critical Environmental Concern

The fence, springs, and juniper control would be adjacent to the ACEC. The proposed management change would assure livestock do not enter the area of the ACEC prior to June 15 of each year, which is after the cultural use occurs and most culturally important plants in the area have produced seed. The proposed action would help assure the plant's continued vigor and production.

No negative impacts on the ACEC are anticipated.

b. Cultural Heritage and American Indian Concerns

Significant sites would be protected by project design and avoidance. If a previously undetected archaeological site was identified during project implementation, work would be stopped immediately in order to assess the significance of the resource and formulate mitigation measures. Project work would resume when the Section 106 process was completed.

c. Noxious Weeds

Improvement in riparian and upland conditions would assist in helping reduce the spread of invasive nonnative vegetation.

d. Special Status Fauna

Sage-grouse habitat would be enhanced due to improved riparian and meadow habitat quality. Spotted frog habitat would also improve.

e. Special Status Flora

A site-specific botanical clearance would be completed prior to project construction. Mitigation would include moving the project location if Special Status plant populations are located in the proposed project area.

f. Water Quality

Water quality in Clear Creek would be improved by reduced fecal matter, stabilized streambanks, and reestablishment of riparian filtering vegetation. Stabilization of streambanks and an improved overstory would provide high quality aquatic habitat through development of pools and undercut banks, as well as the recruitment of woody debris to the stream. The increased quantity, distribution and vigor of riparian vegetation, as well as an increase in bank stability, would reduce stream sedimentation.

g. Riparian Conditions

With the construction of the fence and the proposed grazing management changes to early use in this new pasture, the riparian zone along Clear Creek would improve over time. The proposed early use grazing system would allow the riparian zone along Clear Creek to be used early and less and give the riparian plant species an opportunity for regrowth during the growing season. There would be a short-term negative impact on the vegetation at the springs when development takes place. Fencing the springs and removal of juniper from around the springs should improve riparian conditions and increase water flow. Over time the riparian PFC in Clear Creek should improve to where the stream system will reach PFC for stream reaches in the affected area.

2. Noncritical Elements

a. Range

(1) Vegetation

Upland and riparian conditions would improve as plants are given an opportunity to reproduce and gain vigor under an early/rest/deferred rotation system. The new Connolly Basin Pasture would be grazed during the early growing season. The new Stinkingwater Pass Pasture would be deferred to late summer/early fall. Some areas along the new fence and near the developed springs would show increased use by livestock, but overall trend in range condition would move upward especially on areas in fair condition. The development of springs would help spread the livestock out, gaining better utilization patterns than at present. Vegetation utilization may be higher due to horses being in any one pasture during the grazing season.

(2) Soils

Soil conditions would improve along the riparian corridor as the vegetation increased and trapped more erosional deposits. The upland soils would be maintained by the vegetation increase due to use during times when the plants are not actively growing. Soil compaction would be greater along some of the fencelines due to increased livestock trailing along the fences.

(3) Livestock Management

Livestock management would require another move for the permittees and the associated costs with the move. However, with changes in grazing the overall condition and vigor of the plants would improve. The improvement in vigor and condition of the plants could increase forage value on the allotment with associated weight gains for the livestock. Approximately 3.2 miles of range fence would be constructed to manage livestock movement.

b. Wildlife

Construction of the fence should have no direct impact on wildlife. Development of the springs would allow for better riparian areas and improve water quality below these areas. The anticipated riparian improvement would be beneficial to species that utilize good quality riparian habitat.

c. Recreation and Visual Resources

There would be a slight change in the visual aspects of the area with a new fenceline and grazing use contrast. Hunting opportunities would be little affected by the proposed action. OHV use would not be affected because the area is presently designated a limited OHV area.

d. Fish and Aquatic Resources

The proposed grazing system would use the Clear Creek riparian area earlier and for a shorter duration than the current grazing system. This would allow riparian vegetation an opportunity to regrow during the growing season improving riparian conditions. As riparian conditions improve, Clear Creek should enter an upward trend and progress toward PFC and improved aquatic habitat.

Development of the springs would improve water quality. The spring exclosure fences would reduce trampling and compaction of the springs and provide conditions for an upward trend. As the riparian areas around the springs improve, groundwater storage may increase and the springs may flow more water for a longer period of time.

e. Wild and Free-Roaming Horses

Although gates would be open at other times of the year, wild horse use patterns would be altered during the time period livestock are present and gates closed. The gates would be open at other times of the year. Gates at key locations provide for wild horse movement when livestock are not present. Development of the springs would help the horses better utilize their range and help increase water availability in drought years. This alternative provides more access to uplands when livestock are present than Alternatives II and III.

B. Alternative II - Clear Creek Fence Two

1. Critical Elements

a. Areas of Critical Environmental Concern

The effect would be the same as for the proposed action.

b. Cultural Resources

The effect would be the same as for the proposed action.

c. Invasive Nonnative Vegetation

The effect would be the same as for the proposed action.

d. Special Status Fauna

The effect would be the same as for the proposed action.

e. Special Status Flora

The effect would be the same as for the proposed action.

f. Water Quality

Water quality would be improved at three additional springs from protective fencing and livestock being watered away from the riparian areas. There should be additional water flow at the four sites where juniper control takes place.

g. Riparian Conditions

Three additional springs would be developed. Like the impacts in Alternative I there would be short-term negative impacts consisting of damaged plants and siltation during construction. Long term, the protection of the springs would provide for rapid recovery.

One reservoir would be constructed and provide water to livestock in an area away from existing riparian areas. Livestock watering elsewhere would reduce the impacts to riparian areas.

2. Noncritical Elements

a. Range

(1) Vegetation

The effect would be the same as for the proposed action.

(2) Soils

The effect would be the same as for the proposed action except where the proposed reservoir is constructed. At this location the soil would be heavily impacted where it is moved to create an earthen dam to collect water.

(3) Livestock Management

Use of the riparian area would be less than the proposed action. This alternative would require the second highest amount of maintenance among the alternatives. There would also be an additional cost to the permittee by having to move the cattle one additional time.

b. Wildlife

Big game movement may be inhibited where the fence is close to or on steep slopes.

c. Recreation and Visual Resources

The effect would be the same as for the proposed action.

d. Fish and Aquatic Resources

The effect would be the same as for the proposed action.

e. Wild and Free-Roaming Horses

This alternative may cause the wild horses to spend more time along Clear Creek when livestock are present because access to uplands would be reduced. When livestock are not present the horses would have full access to the uplands.

C. Alternative III - Clear Creek Fence Three

1. Critical Elements

a. Areas of Critical Environmental Concern

Under this alternative, this fence would be the furthest distance away from the ACEC and would provide more distribution of the livestock away from the ACEC.

b. Cultural Resources

The effect would be the same as for the proposed action.

c. Invasive Nonnative Vegetation

The effect would be the same as for the proposed action.

d. Special Status Fauna

The effect would be the same as for the proposed action.

e. Special Status Flora

The effect would be the same as for the proposed action for fences. (No impacts would occur from spring development, reservoir construction or juniper cutting.)

f. Water Quality

Water quality in Clear Creek would improve under this alternative.

g. Riparian Conditions

Because there are no new spring developments proposed under this alternative, there would be no new impacts to any springs. Springs currently in a degraded condition would not be improved or restored.

Conditions on Clear Creek would improve under an early graze treatment.

2. Noncritical Elements

a. Range

(1) Vegetation

The effect would be the same as for the proposed action.

(2) Soils

The effect to soils would be less than for the proposed action.

Only those projects associated with fence construction would occur.

(3) Livestock Management

Use of the riparian area would be less than the proposed action. Fence maintenance costs would be the same as the proposed action. There would be an added cost to the permittee due to an additional move of the livestock as in the proposed action. Because this fence is in view of Clear Creek the livestock will have a tendency to “push” the fence. For this reason, there is a high potential for much higher maintenance cost and breeching of the fence by livestock.

b. Wildlife

Big game movement may be inhibited where the fence is close to or on steep slopes.

c. Recreation and Visual Resources

The effect would be the same as for the proposed action.

d. Fish and Aquatic Resources

The effect would be the same as for the proposed action.

e. Wild and Free-Roaming Horses

This alternative would restrict horse movement the most and may cause horses to congregate all Clear Creek because it restricts movement to uplands when livestock are present.

D. Alternative IV - Clear Creek Fence Four

1. Critical Elements

a. Areas of Critical Environmental Concern

The effect would be the same as for the proposed action.

b. Cultural Resources

The effect would be the same as for the proposed action.

c. Noxious Weeds

Improvement in riparian conditions would assist in helping reduce the spread of invasive nonnative vegetation. There would be no change in the establishment rate of invasive nonnative vegetation.

d. Special Status Fauna

There would be a small increase of grazing in sage-grouse nesting areas. Sage-grouse habitat would improve due to riparian and meadow habitat quality. Spotted frog habitat would improve.

e. Special Status Flora

The effect would be the same as for the proposed action.

f. Water Quality

Water quality would improve in Clear Creek as riparian conditions improve under livestock exclusion.

g. Riparian Conditions

With the construction of the riparian exclosure fence the riparian zone along Clear Creek would improve more rapidly over time.

The riparian area inside the enclosure would have full season growth opportunities. Two crossing areas at the ends of the enclosure would receive heavy use from livestock and horses during late summer and fall. The riparian condition at the crossings would deteriorate further due to congregation on a smaller stream reach. There would be a short-term negative impact on the vegetation at the springs when development takes place. Removal of juniper from around the spring would allow an increase in flow for the springs helping with increased downstream flow as well.

Over time the riparian PFC in Clear Creek should improve to where the stream system will reach PFC for stream reaches within the project area. This option should improve the riparian area more quickly.

If livestock or wild horses breach the enclosure, negative impacts such as consumption of the recovered vegetation could occur.

2. Noncritical Elements

a. Range

(1) Vegetation

Riparian conditions would improve as plants are given an opportunity to reproduce and gain vigor under a riparian enclosure. The uplands would remain in the present condition. The Connolly Basin Pasture would be deferred to late summer/early fall. More areas along the new fence and near the developed springs would show increased use by livestock, but overall trend in riparian condition would move upward. The development of the spring would help spread the livestock out, gaining better utilization patterns than at present. There could be some impact made on the resource due to horses being in one pasture during the grazing season.

(2) Soils

Soil conditions would improve along the riparian corridor as the vegetation increased and caught more erosional deposits. Soil movement in the lower portion of the creek would still be quite heavy during high flows and may increase cutting in this area. Soil compaction would be greater along some of the fencelines due to heavier use in these areas for trailing. The upland soils would remain in a static condition.

(3) Livestock Management

Livestock management would not change from the present system with the exception of a reduction of 125 AUMs in the Connolly Basin Pasture. The fence would be approximately 6.3 miles long which would increase the cost of fencing along with increased maintenance. This alternative would have the highest maintenance cost. If livestock or wild horses entered the exclosures they could cause considerable damage to the riparian areas before they were discovered and removed.

b. Wildlife

Big game movement may be inhibited where the fence is close to or on steep slopes.

c. Recreation and Visual Resources

The effect would be the same as for the proposed action.

d. Fish and Aquatic Resources

The proposed grazing system would allow the riparian zone along Clear Creek to be rested. This may also allow for the recovery of any woody species along Clear Creek in the lower segment of the stream to occur. As the riparian zone is allowed to continue in an upward trend, improvement should occur in the available fish habitat in the creek. The fish habitat should improve due to increased shade provided by the increase in riparian plant species, increased insect habitat providing additional food to fish, increased streambank stability, and over time increased sinuosity.

Fish habitat could recover at a greater rate than the other alternatives.

Over time the riparian PFC in Clear Creek should improve to where the stream system will reach PFC for all stream reaches except at stream crossing areas.

e. Wild and Free-Roaming Horses

Wild horse movement would not be inhibited but may change use patterns slightly due to changing available crossing areas. Development of one spring would help the horses better utilize their range and help increase water availability in drought years.

E. Alternative V - No Action

1. Critical Elements

a. Areas of Critical Environmental Concern

No changes would occur.

b. Cultural Resources

No changes would occur.

c. Invasive Nonnative Vegetation

There would be no change in the establishment rate of invasive nonnative vegetation.

d. Special Status Fauna

No changes from the present condition would occur.

e. Special Status Flora

No changes from the present condition would occur.

f. Water Quality

Water quality would remain static or continue to deteriorate. There could be an increase in water temperature and stream sedimentation.

g. Riparian Conditions

Riparian conditions would remain static or continue to deteriorate from continued soil erosion and encroachment of nonriparian vegetation into riparian areas.

2. Noncritical Elements

a. Range

(1) Vegetation

The uplands would remain in a static condition.

(2) Soils

Although high flows would cause the soil conditions along the riparian corridor to continue to deteriorate; the upland soils would be maintained by the present vegetation.

(3) Livestock Management

Livestock management would incur no extra costs of moves or fence maintenance and would remain the same as at present.

b. Wildlife

Wildlife values would not change noticeably from their present condition. The continued riparian degradation would be detrimental to those species that utilize good quality riparian habitat. Riparian areas would remain high use areas when livestock are present.

c. Recreation and Visual Resources

No changes would occur.

d. Fish and Aquatic Resources

The continued lack of vegetation along the stream would keep the aquatic resources at a minimum and fisheries would not improve.

e. Wild and Free-Roaming Horses

Horses would have the greatest opportunity to move freely.

F. Cumulative Impacts

1. Alternative I - Clear Creek Fence One, Proposed Action

No cumulative impacts were identified.

2. Alternative II - Clear Creek Fence Two

No cumulative impacts were identified.

3. Alternative III - Clear Creek Fence Three

No cumulative impacts were identified.

4. Alternative IV - Clear Creek Fence Four

No cumulative impacts were identified.

5. Alternative V - No Action Alternative

No cumulative impacts were identified.

CHAPTER V. PERSONS AND AGENCIES CONSULTED

Alfred and Carole Dunten
Glenn and Sherri Harris
Charles and Norma Miler
Oregon Department of Fish and Wildlife
Marc and Polly O'Toole
Pat and Susan O'Toole

CHAPTER VI. PARTICIPATING STAFF

Bill Andersen, Acting Natural Resource Supervisor
Dean O. Bolstad, Wild Horse Management Specialist
Gary Foulkes, Environmental Specialist
Rudy Hefter, Acting Three Rivers Resource Area Field Manager
Jim King, Range Management Specialist, Preparer
Lesley Richman, Weed Specialist
Fred Taylor, Wildlife Biologist
Nora Taylor, Botanist
Scott Thomas, Archaeologist
Michael Weston, Fisheries Biologist

CHAPTER VII. MAPS

- A. Proposed Action
- B. Proposed Action Grazing Management
- C. Clear Creek Fence Two
- D. Clear Creek Fence Two Grazing Management
- E. Clear Creek Fence Three
- F. Clear Creek Fence Three Grazing Management
- G. Clear Creek Fence Four
- H. Clear Creek Fence Four Grazing Management
- I. No Action Alternative
- J. No Action Alternative Grazing Management